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MARSHALL STAR

Serving the Marshall Space Flight Center Community Jan. 18, 2007

An interview with Marshall Deputy Director Charles Chitwood

Marshall Center Deputy Director Charles Chitwood talks about the changes to the center, challenges faced at the center, the workforce and the center's strengths.

Doug Stoffer/MSFC

Marshall Center Deputy Director Charles Chitwood recently shares his perspective about Marshall in an interview with the "Marshall Star."

As deputy director of the Marshall Center you are second in command to Director David King. What are the main responsibilities of your position?

I first want to make the distinction that NASA can be led — it can't be commanded. There are several opportunities for leadership under Center Director David King. The director's office is asked to do many things across the agency and the country. These are humbling things, and my responsibilities are often to be there and stand in on David King's behalf.

Responsibilities for the deputy director are focused around finding opportunities to integrate the missions and programs that Marshall accomplishes with the entire center, other parts of NASA and our stakeholders. That can mean opportunities for communications, collaborations, integrations and providing or obtaining information — there are a lot of different aspects to that. I view my job as an opportunity to look at what we do in the programs and projects here and across NASA and look for ways things fit together.

What are the biggest challenges you face as deputy director? What are you doing to deal with them?

There are several different challenges. NASA and Marshall do so many different things, and looking for the integration opportunities involves understanding a wide variety of things. Another big challenge I find is that we do so many interesting and compelling projects that I have to work hard to maintain a balance. It would be easy to concentrate on one area and, as a result, not fulfill the responsibilities to integrate. That's my personal biggest challenge.

What do I do about it? I try to get out and see a lot of things across the center — technical and programmatic processes at different stages. I look to see how something works from the beginning, to the middle and to the end. People are usually concerned with what they are excited about. A group or groups of people may be working toward a specific mission outcome in such a focused way that they may not have fully recognized secondary outcomes that are very, very important.

One example is the NSSTC project called SERVIR (an environmental monitoring and decision support system for Mesoamerica). That began as a project to use earth-observing satellite data to help archeologists locate sites or archeological interests. It has quickly grown into something that offers many different societal benefits. The project not only helps us in understanding how human beings affected the Yucatan Peninsula in the last two millenniums, but how it's being affected today.

The data from that operation is being used by environmental ministers and decision makers in Central American countries to

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Marshall Director David King to hold all-hands meeting Jan. 24. Details on page 2.

Marshall Director David King to hold all-hands meeting Jan. 24

Marshall Center employees are invited to join Director David King and other senior managers for a discussion on the challenges and opportunities that face the center in 2007 during an all-hands meeting on Wednesday, Jan. 24, at 10 a.m. in Morris Auditorium.

The meeting will focus on all aspects of Marshall activities. Results from the proposed Lunar Architecture also will be presented. This will be the first opportunity in 2007 for the Marshall team to come together and discuss our roles and missions for the coming year. All employees are encouraged to attend. The event also will be viewable on Marshall TV and Desktop TV. Bus transportation to the event will be available.

'Focus on Marshall' hits the road for January

By Bill Hubscher

The newest edition of "Focus on Marshall" provides proof that you don't have to work at the Marshall Center, or even in Alabama, to be a Marshall Center employee.

Marshall TV viewers are on a visual journey to the Sunshine State, as "Focus on Marshall" co-host Lori Meggs visits the Kennedy Space Center, Fla., to tour the Marshall Resident Office.

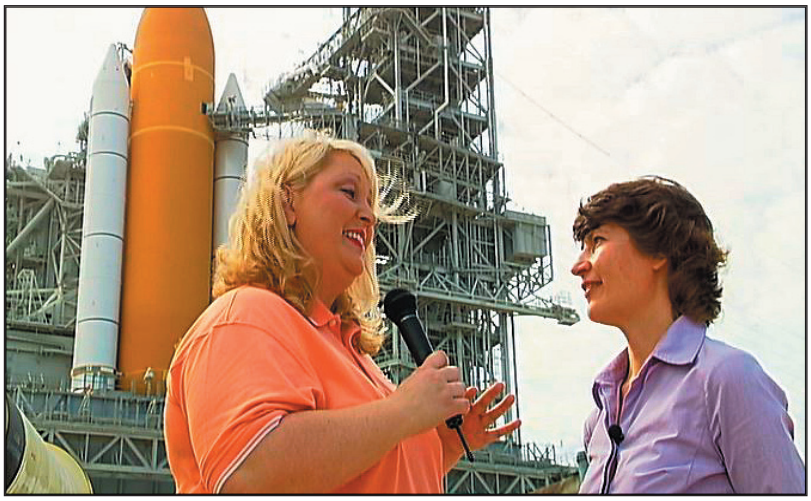
Marshall's propulsion expertise is a vital part of every space shuttle mission launched from Kennedy. The 21 Marshall employees working and living in Florida year-round work with the propulsion elements of the space shuttle, which include the external tank, solid rocket boosters with their reusable solid rocket motors and the shuttle's main engines.

Meggs talks to Jolene Martin, manager of the Resident Office, who escorts the "Focus on Marshall" crew to all the many areas involving Marshall's presence at Kennedy. While at the Vehicle Assembly Building, Martin explains how the propulsion elements of the shuttle come together for a launch.

Other stops on the tour involving Marshall engineers' work include the ships that retrieve the solid rocket boosters from the ocean — where they are jettisoned after launch — and the hangar where they are refurbished and prepared for the next launch. Program viewers also will see the high-tech "garage" where shuttle engines are cleaned and prepared for launch, the Launch Control Center where Marshall Center managers monitor launch activities, and the Space Station Processing Facility where engineers work on Marshall-managed hardware. The tour culminates with a visit to the launch pad where the Space Shuttle Discovery was poised to begin its mission last December.

"Focus on Marshall" airs on Marshall TV and Desktop TV the first and third Tuesday and Thursday of each month at 11 a.m., noon and 1 p.m. The program also will be posted on Inside Marshall and the Marshall home page within the NASA portal Web site.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.



Marshall TV

"Focus on Marshall" co-host Lori Meggs, left, interviews Jolene Martin, manager of the Marshall Resident Office at Kennedy Space Center, for the latest segment of the program. Space Shuttle Discovery, in the background, launched a few days after this interview was conducted.

Environmental Excellence Team invites Marshall employees to participate in Earth Day contests

Marshall's Environmental Excellence Team is inviting all employees to participate in two contests to celebrate Earth Day 2007. There will be a logo contest and a photo contest. The theme for this year is "Earth Day Every Day."

The deadline for the logo contest is Feb. 1. The deadline for the photo contest is March. 31.

For more information and directions on how to submit, go to "Inside Marshall." Contact Ben Morrow at 544-5573 for questions.

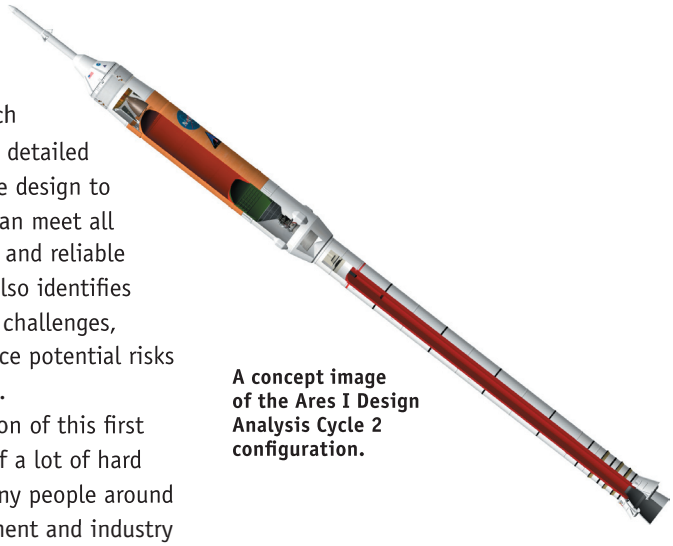
NASA completes review milestone for Ares I launch vehicle

By Sheri Bechtel

NASA recently completed the Ares I crew launch vehicle system requirements review — the first such milestone for a U.S. human-rated launch vehicle system in more than 30 years. This review brings the agency one step closer to developing a new mode of space transportation for astronauts on missions to explore the moon, Mars and other destinations.

The system requirements review, completed Dec. 19, confirmed that the Ares I system requirements were complete, validated and responsive to mission requirements. It also confirmed that the Ares I architecture and design concept can fulfill the mission objectives, and the Ares project is ready to begin engineering design activities.

The review is the first in a series of milestones that will occur before actual flight hardware is built. Each major review provides more detailed requirements for the vehicle design to ensure the overall system can meet all NASA requirements for safe and reliable flight. The review process also identifies technical and management challenges, and addresses ways to reduce potential risks as the project goes forward.



A concept image of the Ares I Design Analysis Cycle 2 configuration.

"The successful completion of this first review is the culmination of a lot of hard work and long hours by many people around the country by our government and industry team," said Steve Cook, manager of the Exploration Launch Projects Office at the Marshall Center. "The result of their tireless efforts is that the board confirmed that we have a good, stable set of requirements to start the design phase of Ares I."

The review follows a series of successful system requirements reviews for the Ares launch vehicle project, including for the J-2X engine, Ares I first stage and Ares I-1 test flight. The J-2X engine will power the upper stage of Ares I, as well as the Ares V Earth departure stage that will propel Orion from Earth orbit to the moon late next decade. Ares I-1, planned for launch in 2009, will be the first test flight of the integrated launch vehicle system.

In January 2007, the Ares project will begin the second in a series of design analyses cycles leading to final design and fabrication of the launch vehicle. This cycle will baseline design changes made during the first cycle. In the updated Ares I configuration, a

See Ares I on page 8

Bob Devlin appointed to the Senior Executive Service as deputy director of the Office of Center Operations

Bob Devlin has been appointed to the Senior Executive Service and named the deputy director of the Marshall Center's Office of Center Operations. He will be responsible for overseeing institutional services in environmental engineering, logistics and transportation, facility management and operations, industrial labor relations, protective services, occupational medicine, and environmental health and emergency management.

Bob Devlin

The Senior Executive Service is the personnel system covering top managerial positions in approximately 75 federal agencies.

Devlin comes to Marshall from Intergraph Corporation in Huntsville where he had served as Consequence Management Business Unit manager since August 2005. There, he managed a business unit of 19 people with revenue of more than $7 million. Prior to joining Intergraph, he served in the U.S. Army for 24 years, retiring as a colonel. Devlin was assigned to several key positions throughout his military career, which culminated with his position as U.S. Army Garrison Commander of Redstone Arsenal. In this position, he was responsible for directing a comprehensive array of institutional services including environmental engineering, food services, acquisitions, institutional and program support equipment, logistics and transportation, industrial labor relations, protective services, and all programs and emergency management operations for personnel living and working on Redstone Arsenal.

Throughout his military career, Devlin received numerous honors including the Joint Services Commendation Medal, Joint Services Achievement Medal, Volunteer Service Medal, Defense Meritorious Service Medal and four Army Meritorious Service Medals.

A native of Durham, Conn., Devlin earned a bachelor's degree in political science in 1981 from Westminster College in Fulton, Mo.; a master's degree in business administration in 1990 from Babson College in Wellesley, Mass.; and a master's degree in strategic studies in 2001 from U.S. Army War College in Carlisle, Pa.

Devlin, his wife, the former Jennifer Knauf of Springfield, Va., and their son live in Monrovia.

Jessica Wallace, an ASRI employee and Marshall Star editor in the Office of Strategic Analysis and Communications, contributed to this article.

Marshall's Office of Procurement — building business relationships for exploration

By Sheri Bechtel

As NASA and the Marshall Center move toward fully implementing the Vision for Space Exploration — to complete the International Space Station, return to the moon and travel throughout our solar system — one Marshall organization is leading the way in building business relationships to support the agency's exploration missions.

The Office of Procurement is a key staff element that supports the entire Marshall Center by providing acquisition support to all center organizations, and procuring a wide range of goods and services needed by Marshall to perform its mission.

In essence, without the work of the Procurement office, you wouldn't be able to conduct business on a daily basis. For instance, the materials you use in the lab and the computers at your desk were bought by someone in Procurement. The flight hardware that goes up on the shuttle was acquired through Procurement.

Doug Stoffer/MSFC

Emil Posey

But these days, it's not quite "business as usual" for some members of this organization.

The Space Transportation Support Office is one of five within the Office of Procurement. It comprises two teams — one supporting the Shuttle Propulsion Office at Marshall, and the other supporting the Exploration Launch Projects Office, which manages the Ares I and Ares V launch vehicles at Marshall. The two teams, totaling 21 employees, have found themselves on the cutting-edge of procurement work, said Emil Posey, manager of the office.

"On one level, the work being performed by our folks is also being conducted at other centers around the agency," said Posey. "What is unique about it, though, is that we are conducting business in a time like no other — when NASA has a clear set of exploration goals, where the Space Shuttle Program has a specific end date and the Constellation Program is standing up. You could work a career in the procurement field and not encounter the activities and actions my folks are conducting right now."

For example, said Posey, the shuttle program, which has operated successfully for some three decades, brings a unique set of challenges as the final series of flights near and, at the same time, the workforce safely transitions to other NASA activities. These challenges include contract reformations, meaning the team is reworking contractual agreements on each of the major shuttle prime contracts to meet the run out of the program in 2010. This involves settling a large portion of each contract and extending the remaining portion an additional two years. They also are terminating a major portion of one contract.

Doug Stoffer/MSFC

"This team is doing their best for their customers and for the Marshall Center to ensure each successfully meets its mission in support of NASA's exploration goals," says the team's manager, Posey.

On the Ares side, with a new program/project start-up, the Procurement team has found innovative ways to begin work to meet crucial schedules. They've also found ways to posture the team to put long-term contracts in place to carry the project through the design, development, test and evaluation phase and into production.

Meanwhile, the teams also are looking at how to contractually manage the Michoud Assembly Facility in New Orleans as a Marshall Center asset. The facility is managed by Marshall for NASA. In coming years, Michoud's capabilities will be used not only to continue shuttle work, but also for NASA's Ares launch vehicles, the Orion crew exploration vehicle and other related exploration activities.

Overall, the Procurement office's mission is to provide support from the beginning or initiation of a requirement — the light bulb going off in someone's head, for instance — all the way through contractor selection and, finally, contract award. It then provides contract management during the contract's duration through close-out, when the contract is finally put away in a storage area somewhere. It's a lengthy process, which the teams strive to do on time and in compliance with governing regulations and standards.

"My folks are fully engaged in these activities," said Posey. "They work closely with their customers, other NASA centers, NASA Headquarters in Washington and other government agencies, not to mention our contractors. The work is critical to program success and is highly visible and time sensitive. Combined, they're working a large number of actions totaling close to $9 billion, and they are getting the job done."

It's also a job that is truly a Marshall team effort.

"The Procurement teams work closely with the Marshall project

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Marshall meets key objective in developing new propulsion method

By Sherrie Super

Tapping the power of 1,500 suns, scientists at the Marshall Center have met a critical milestone in the development of aerocapture technology, a maneuver that primarily uses a planet's atmosphere to capture a spacecraft and place it in the desired orbit.

The In-Space Propulsion Technology Project has successfully tested a series of 12-inch-square thermal protection panels. The tests focused on a type of spacecraft-shielding material called an advanced charring ablator.

"The tests exposed ablators to solar power levels up to 150 watts per square centimeter — approximately 1,500 times the intensity of the sun on Earth on a clear day," said Bonnie James, aerocapture technology manager at Marshall. "This helped us simulate the high temperatures encountered by a space vehicle using aerocapture to complete a hypersonic flight through a planet's atmosphere."

The tests were part of a larger effort by NASA and technology developers from partnering institutions to place space vehicles into long-duration orbits around distant planets and other bodies throughout the solar system without heavy, on-board fuel loads. Instead, the nearly propellant-less method uses friction to slow a spacecraft entering the atmosphere of its destination planet. The thermal protection system shields the spacecraft from heat produced by the friction.

The tests were conducted at the Sandia National Laboratories in Albuquerque, N.M. Located on Kirtland Air Force base, Sandia's National Solar Thermal Test Facility is a nine-acre test site with a 200-foot-tall solar tower, 212 computer-controlled mirrors called heliostats and a separate five-story control tower. The heliostats harness the power of the sun and direct it to a test sample mounted on top of the solar tower. With the total mirror area exceeding 84,000 square feet, the facility can subject specimens to up to 260 watts of thermal energy per square centimeter — about 2,600 times the intensity of the sun on Earth.

"Data from the tests are helping us determine the overall suitability of advanced thermal protection systems, adhesives and structure combinations for a future rigid aeroshell system," said James. Aeroshells are protective "shells" that surround the spacecraft. The aeroshell and thermal protection systems under study have similar characteristics to those developed for past missions to Venus, Mars and Jupiter, along with missions to return spacecraft from the moon to Earth.

During the last three years, NASA and its partnering organizations have conducted more than 100 similar tests on samples ranging from 5-inch-diameter heat shield components to panels up to 24 inches square.

The tests also advance the technology readiness level of ablator families funded by the In-Space Propulsion Technology Program. With lower densities, higher performance and better insulative properties than current state-of-the-art technologies, these ablators have the potential to round out NASA's current thermal protection system portfolio for aerocapture and planetary entry.

Aerocapture technology development is funded by NASA's In-Space Propulsion Technology Program.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Steve Moon

A thermal protection panel reacts to sunlight, focused by large mirror arrays on the ground.

Procurement

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offices, safety, property management, finance, security and others," explained Posey. "For example, when we go into negotiations, we do not have the technical expertise related to the space systems or hardware, or the safety and mission assurance expertise. So, we pull in the people and expertise we need from across the center to help put a contract in place and administer it after award. We couldn't do it without them."

The procurement teams also work shoulder-to-shoulder with the technical community and other agencies. It's a lot of work, requiring team members to fill many roles, from facilitator to negotiator. But, said Posey, it's a job his entire office handles with enthusiasm and professionalism.

"We could put my folks up against any group in the agency in procurement," said Posey. "They are doing an amazing amount of work and are successfully dealing with a wide range of challenges. They do their best for their customers and for the Marshall Center to ensure each successfully meets its mission in support of NASA's exploration goals. I can't say enough good things about them."

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Chitwood

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do things such as direct fishing fleets around red tides in the Pacific Ocean. We are also learning that there are signatures for different soils that can yield vastly increased corn productivity. You can determine the different soils from space. While SERVIR had a big impact on the way archeology is done, there also were unintended consequences and outcomes that have a huge benefit.

Another important challenge I will address this year is to understand all the missions, different activities and different stakeholders' points of view for Marshall. I am going to tilt the balance a little more inward toward the center.

I have spent the last couple of years understanding what our stakeholders wanted as we make changes for the Vision for Space Exploration. We have great plans and we are moving ahead. In 2007, I am going to spend more time around the center working to communicate and integrate opportunities here at Marshall.

Doug Stoffer/MSFC

Chitwood says that meeting the challenge of connecting science and exploration will be the basis of Marshall's future health in science.

I was talking with Engineering Deputy Director Chris Singer about the four engine cutoff sensors in the external tank on the space shuttle. We absolutely have to have one to operate. It goes back to the fail/operate, fail/safe rule. There have been some pretty significant self-examinations.

There are discussions about very similar requirements in the development of Ares I. The challenge is to connect people at different project offices and different branches of engineering, here at Marshall engineering and programmatic people in Houston, so we can all benefit from these very careful and considered self-examinations.

What do you see as Marshall's greatest strengths?

One of Marshall's greatest strengths is that it has adapted, reinvented and reapplied itself in many different circumstances throughout its 45-year history. What became Skylab grew out of the Apollo applications program that started in 1965 at this center. Well before the Saturn V rocket was launched to the moon, they were thinking and working toward the next step. All of that grew into the space shuttle, Spacelab, and 24 incredibly successful missions, and then into taking on the challenge of permanent presence in space with space station.

You have folks that came to NASA to do one thing and are connecting to the missions we have today. Those people are throughout the center making their contributions. They aren't doing what they thought they would be doing. That is one of Marshall's biggest strengths — the ability to adapt, stay part of, and have a focus on NASA's missions and its outcomes no matter what.

In my travels around the agency I have seen that one of Marshall's strengths is that it is very deeply involved in the mission of three of the four mission directorates — space operations, space exploration and science. I believe that our ability to connect those things is a great strength. As I said before, meeting the challenge of connecting science and exploration will be the basis of Marshall's future health in science.

We have a heritage in rocketry that goes back to before there was a NASA. That heritage is a strength.

We have people who grew up hearing rocket tests and are here because it is their dream to be here. Probably every big human endeavor has some people who are there because it is their dream. We are fortunate, because we have many people who are here because it is their dream and their dream job.

I have worked in several other fine, large organizations. The dedication and integrity that I see at Marshall exceeds that of any other organization that I have been a part of. We have the strength that will make us look at ourselves honestly when the hard things happen and find ways to make it better.

What would you encourage center employees to do in 2007 to help make the center successful?

There are times when you have to say go home. If there is a lot of activity, but not a lot of progress, maybe we would be able to make a better decision if we all sleep on it.

We need to make sure we trust each other. We have to trust people to make some decisions and do their jobs. When mistakes, shortcomings or shortfalls happen, which inevitably will in every human endeavor, we support each other in resolving them. That is a really difficult balance.

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Chitwood

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One of Marshall's strengths is that we actually find ways where different approaches engage each other. We have an astrophysicist at Marshall who put his career on hold for two years. He went to work with the foam people in the Space Shuttle Program. He thought he could help them discover what they didn't know about the foam. People do that kind of thing every day around the center. That is a strength — that ability to have that trust and respect and bring it together.

NASA and Marshall in 2007 are being asked to do as much as we possibly can. When someone in another department, branch or organization has to do something to help you accomplish your outcome, spend a little time with them. Make sure you understand what part of meeting that task or what other things besides your requirements they need to accomplish the task.

For instance, if we are going to procure a pump, the person who needs the pump to do the test knows why they need that pump. They may not know the federal acquisition regulations the procurement person has to go through to secure that pump. I am not saying every engineer needs to become a procurement specialist, but you should take the time to understand just a little better what the other person has to go through to do their job. You might be able to prepare to help them do their job a little better, a little faster.

There are many more of those kinds of opportunities. The only way to get more done is to understand more.

What areas would you like to see improve at the center?

We need to help each other maintain a healthy balance. This is a theme of mine. We're knowledge workers. What we produce is hardware, but it's the product of our minds. We need our minds to be healthy. For our minds to be healthy, our bodies have to be healthy. For our minds and bodies to be healthy, we must be in a place of emotional health and safety. It is a challenge of every adult — for themselves and their family.

We are fortunate that we have people whose vocation and avocation are the same — what they do is their hobby as well. But we also must respect that we work with people who have not made that same decision. We need to find a way to work that accommodates both points of view. We need to help each other be healthy and maintain that healthy balance, because there will always be more demands.

I was talking to someone who recently joined NASA. He told me, "I always feel like there is always more to do." I told him that feeling is not going to go away, but if we do too much, we will end up contributing less, hurt ourselves and the people around us. If we value and trust each other, we will help each other find that balance. That means telling people to go home sometimes. That means sometimes unplugging the BlackBerry and having an e-mail free weekend. It means making the decision that you can do that, and the mission is not going to suffer — because people are going to be more rested.

My wife is in aerospace. Our children help make sure all our conversations aren't about the things at work. We want to connect about other things.

For many years Marshall has had an important role in NASA science. How healthy is Marshall science currently? How do you see the center's role in science moving forward?

When you go to the doctor and get a checkup, he looks for vital signs. If you look at the vital signs of Marshall science, it's very healthy. Marshall science and our scientists have earned a lot of respect and recognition in the community. We have multiple Rossi Prize winners, which is the biggest honor for significant contribution in high energy astrophysics.

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Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue is 4:30 p.m. Thursday.

Miscellaneous

Queen oak bed, headboard w/2 globe lamps mirror, dresser w/ mirror & globe lamps. 256-541-1788

Ashley woodburning stove; Sears upright freezer, 18 cubic feet, make offer. 837-1940

Two 12-volt motorcycle batteries adapted for Power Wheels Jeeps. 651-4603

Pro-Form Cross Trainer exercise machine, electronic weight adjustment, 1 lb. increment, $150. 256-586-7375

Queen bedroom suit w/mattress and box springs, 4-pieces, $1,250. 325-3568

Chain-link dog kennel, 10'Wx10'Lx6'H, includes three plain panels and one gate panel, $150. 604-8434

E-Machine computer, 15" monitor, Windows Me, Staroffice, 15GB Hard Drive, 12X DVD Drive, $100. 256-479-9781

Firewood - hardwood, most maple, oak. Dry and seasoned. Park City-Fayetteville area. 931-433-1866

Moonroof visor for 2006-2007 Honda Civic Sedans, $50. 256-850-4185

16-bulb tanning bed. Used only a few times. $900. Call Tammy @ 520-1400

Whirlpool large capacity dryer with power cable $50. 683-9638

Lexington oak bedroom set (solid hardwoods) includes bed, dresser, chest, armoire, night stands (2), $1500. 961-2201

2003 Epiphone Casino Guitar, sunburst finish w/hardshell case, rarely played, $500. 684-0910

Refrigerator w/ice-maker, $130; table w/six chairs, $130; ab roller plus, $20. 682-7165

Custom built smoker, 250 gallon tank on 14ft trailer, 2 wooden storage boxes, $2500. 520-2327

Concept 2 Indoor Rower, $700. 837-9420

Tapestry sofa and loveseat - green, purple, cranberry, $450; alder wood entertainment center, 3 pieces, $450. 881-3527

Gas powered scooter, $165. 683-9364. If no answer, leave message.

Graco car seat with 2 bases, Fisher Price Jumperoo, Evenflo ExerSaucer, Evenflo Highchair, $30 each. 651-8507

Golf clubs Ben Hogan Hybrids 2 & 3 Graphite, $110 for both. 536-8692 or 683-3397

GE washer, $95; Kenmore dryer, $90. 837-6649

Sony 35" Trinitron color TV. 931-455-7303

AKC Lab pups $250, 3 chocolate female, 3 yellow male, 3 light yellow female. 256-498-0923

Vehicles

2003 BMW Z4, silver w/gray top, loaded with options, auto transmission, $21,900. 883-6894

1964 Ford F100 V8, $600. 256-339-0970 or 256-773-6644

2003 Ford Ranger Super Cab, 4 door, automatic, XLT, 4WD, 4.0L/V6, 34K miles, bedliner, $15,900. 714-4575

2002 Mazda Tribute ES V6 4x4 68k miles, silver, Michelin tires, $12000. 489-6320

1997 Jeep Grand Cherokee Laredo, red, leather, 6 cyl, 4.0L, 188k highway miles, 23mpg, $3700. 256-599-3094

2002 VW Jetta TDI, 45mpg, new tires, 79K miles, $12,500. 256-434-0073

2002 Mercury Sable, new tires, DVD player, cruise, 53k miles, extended warranty, $8000. 256-461-9978

2000 Ford Expedition, 5.4L, white/grey, leather, towing package, loaded,118K miles, $8000. 682-0840

Free

Puppies, mixed breed. 508-7527

Found

Building 4203, ladies gold metal framed eye glasses, found in 4200

Lost

Red engraved Apple iPOD, reward

Samsung white 1GB memory stick/music player, wellness center area, reward. 665-1485

Ares I

Continued from page 3

common bulkhead between the upper stage liquid hydrogen and liquid oxygen tanks has been substituted for an intertank, thus shortening the vehicle. The thrust profile for the Ares I first stage also has been baselined. This means requirements have been established for how the solid propellant inside the five-segment reusable solid rocket booster burns during ascent.

The Ares preliminary design review is scheduled for mid-2008.

The writer, an ASRI employee, supports the Office of Strategic Analysis and Communications.

Chitwood

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Now we have had to make the adjustment to the reduced scope of science on board the International Space Station. This was one of those very difficult priority decisions that had to be made to accomplish the Vision for Space Exploration. I can't express the pride I feel in the people at Marshall Space Flight Center who devoted so much of their time, energy and their careers toward those goals. Now they are being asked to refocus their efforts on many different things across the center.

That doesn't mean that science is not healthy. I want to talk about NASA as an instrument of national policy. Leading President Kennedy's challenge to take humans to the moon and return them was an incredible accomplishment of the 1960s. There were many people involved who were very disappointed we didn't continue to do that. It's interesting when you read different history books and the explanations for that. There are a number of historians who talk about President Nixon's desire to balance the budget, and say he submitted to purely budgetary pressures.

I submit that there were at least a couple of other things that contributed to us not continuing. All of the reductions in the Apollo budget didn't go to balancing the budget. Many of those research and development dollars went into a different national priority. I submit one explanation is the war on cancer. The National Institute of Health grew in the 70s in a way that I can associate as a decision to focus the government's discretionary resources in a new endeavor.

The nation's technical and scientific community can be rallied around and accomplish some incredible things. How do we decide to do this? It's a process. I was sent a speech given by Wernher von Braun. Here is a point I got out of it. Democracy is not the most efficient way to fund the exploration of space. But he had lived and worked in a more efficient place and he would take democracy, thank you.

There has been a big open debate in the press, Congress and the administration about what NASA's priorities should be. Lots of people have exciting things that NASA could do and would like to do. But we can't do everything. We always have to make difficult choices. I think Marshall does a very good job of adapting.

I believe the center's role in science is moving forward. I believe that Marshall connects to three of the four mission directorates — space operations, space exploration and science. Meeting the challenge of connecting science and exploration is what will be the basis of Marshall's future health in science.

We need a broader engagement in science and exploration and new things will grow out of that. There are considerations of doing Earth science and astrophysics from the lunar surface. There will be many different ways that we didn't know and didn't anticipate that science and technology will integrate differently in accomplishing the renewed Vision for Space Exploration.

Marshall has the heritage of Dr. Wernher von Braun in rockets and Dr. Ernst Stuhlinger in science. It's in everything we do at NASA and we will remain true to that heritage.

Rita Roberts, an ASRI employee who supports the Office of Strategic Analysis and Communications, conducted this interview for the "Marshall Star."

MARSHALL STAR

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